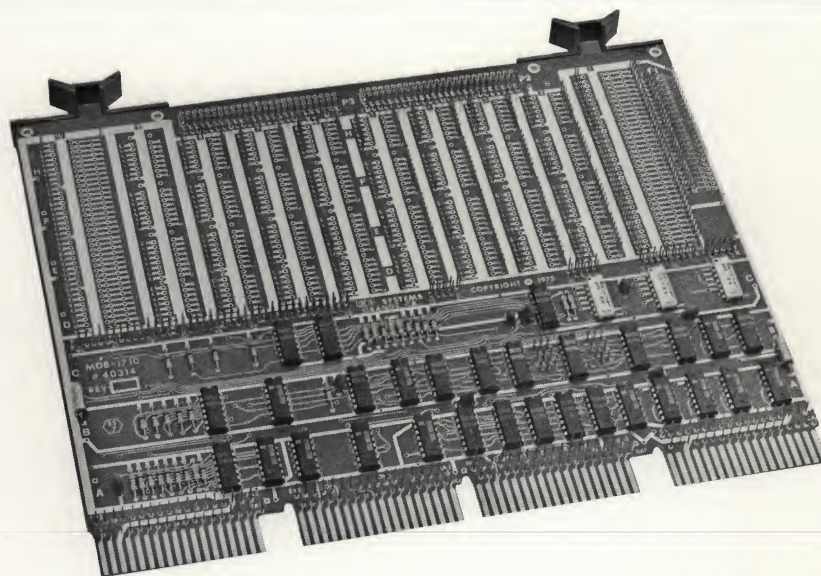


MDB

1710 GENERAL PURPOSE INTERFACE MODULE for use with PDP*11 Computers



- low-cost PDP-11 Unibus* to-peripheral interface
- Unibus address and dual vector interrupt logic furnished and ready
- Unibus I/O permits expansion for multiple controllers
- room for 40 IC's for user's peripheral interface
- takes 14-pin to 40-pin IC's
- fits standard DEC board spacing

The MDB 1710 General Purpose Interface Module provides a flexible and economical interface between a PDP-11 Unibus and the user's peripheral.

The MDB-1710 consists of mounted IC devices plus wire-wrap facilities for up to 40 IC devices on a single quad module. The module accommodates wire-wrap sockets or directly mounted IC's in 14, 16, 22, 24, or 40-pin devices. With wire-wrap posts on the component side of the board, the module fits DEC's 1/2-inch spacing without interference.

Essential and universal Unibus logic interface elements are pre-mounted and interconnected, with wire-wrap facilities for address selection and interrupt vectoring. Wire-wrap posts also make it easy to connect Unibus driver inputs and receiver outputs for multiple-controller applications.

Integrated-circuit devices furnished on the module provide logic to handle three primary functions: address selection,

interrupt control, and the Unibus electrical interface.

Address Selection Logic

Address selection logic includes receivers, decoders to provide 16 sequential addresses, and logic to provide a synchronizing pulse under control of an external master device.

Wire-wrap posts permit jumper selection of addresses from 760000 to 777770. Decoders are enabled by a wire-OR bus having 14 inputs, nine of which may be strapped to the OR bus for user address selection. The four least-significant bits are decoded to obtain eight DATI addresses, and eight DATO addresses.

A sequence of output synchronizing pulses are provided to notify the PDP-11 of device addressing, and for loading registers, etc., after the user address is detected and a master device asserts a pulse MSYNL.

Byte I/O transfer logic is also provided and accessible at wire-wrap posts.

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Interrupt Control Logic

Two separate interrupt control sections provide interrupt requests to the PDP-11 through unique vector addresses. Any two vector addresses (4 through 374), and bus request levels (4 through 7), may be selected using wire-wrap jumpers on the module.

Either interrupt request initiates a bus request sequence on a selected bus request line. A resulting bus grant signal then causes logic to issue DSEL to the user interface to indicate that the interrupt sequence has begun and the interrupt request may be removed.

Interrupt control logic executes the rest of the sequence, issuing control signals and causing the related vector-select signal to gate the jumper-selected address into data lines 2 through 7.

Unibus Interface

Unibus drive inputs and receiver outputs are available on wire-wrap posts for use in multiple-controller interfaces. Driver inputs include pull-up resistors for 7403-type open-collector gates to permit OR-tying additional inputs to the drivers. Unibus receiver outputs accommodate as many as 30 unit loads.

User Interface

User interface logic consists of logic added to the MDB-1710 module by the user to suit his specific interface requirements.

Of the 40 IC device positions in the user's portion of the board, 16 are dedicated for 14-pin devices and have pre-wired power and ground connections. The remaining positions accommodate either 14 or 16-pin devices, or a number of 22, 24, or 40-pin devices (with a corresponding reduction in the total device capacity). Two sections of the board, if free of IC devices, are useful for installing discrete components in plated-through holes.

The module may include three (optional) ribbon cable connectors for interconnection between the MDB-1710 and external devices or other MDB modules.

Electrical Requirements

- +5V at 0.5A

Accessories

- Optional general purpose cables available

Physical

- Occupies one quad slot of standard system unit

